

# The Effects of COVID-19 on the Commercial Construction Industry in California: A Case Study

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As a result of the COVID-19 pandemic, construction companies across California have been forced to quickly adapt to new protocols and regulations. Since certain areas of California have been more impacted by the pandemic, construction companies in those counties have been forced to comply with stricter coronavirus guidelines. Between the regions researched in this case study, the Bay Area has been affected the most by COVID-19 shutdowns and regulations. Then, Los Angeles County and San Diego County, which faced similar restrictions. The least restrictive area to build during the pandemic is the Central Valley, where there were less reported cases. Despite the difference in restrictions, the companies in this case study implemented many of the same COVID-19 protocols throughout all regions. In terms of business risk, the location of each company was not determined to be a factor. These conclusions were determined after conducting two rounds of semi-structured interviews with five companies located in various regions of California. The objective of this case study is to inform future and current industry members, as well as educators, of changes made within the commercial construction industry in California as a result of the COVID-19 pandemic.

**Key Words:** COVID-19, Pandemic, Safety, Risk, Commercial Construction

## Introduction

### *COVID-19 in California*

California confirmed its first COVID-19 on January 25, 2020 in Orange County. Cases began to emerge across California and on February 14<sup>th</sup>, San Diego declared the first local health emergency after reporting two cases. Not long after, San Francisco declared a local health emergency on February 25<sup>th</sup>, followed by Orange County the next day. As cases continued to multiply, Governor Gavin Newsom declared a state of emergency for the State of California on March 4<sup>th</sup> (CalMatters, 2020). On March 16<sup>th</sup>, the Bay Area imposed the first Shelter-in-Place order for the counties of Alameda, Contra Costa, Marin, San Francisco, Santa Clara, Santa Cruz, and San Mateo (CalMatters, 2020). Only three days later, Governor Newsom issued a state-wide Shelter-in-Place order. In the construction industry, these Shelter-in-Place orders impacted companies differently by region. While construction was deemed essential in most areas of California, Bay Area companies were limited to “public works, housing, airport operations, [utilities], oil refining, roads and highways, public transportation, solid waste collection and removal, internet and telecommunications” projects (Bernardi, 2020). These shutdowns, along with new COVID-19 safety guidelines, have taken a toll on construction companies across the state.

## Literature Review

Due to this unprecedented pandemic, documentation on construction company safety protocol related to COVID-19 is limited to individual company offerings and not to thoroughly vetted research. However, there have been recent periodical submissions on COVID-19’s impact on contractual performance thus requiring a brief discussion here.

Although, most construction was deemed an essential industry during the COVID-19 pandemic, many companies have been forced to shut down jobsites for various reasons, ranging from the financial uncertainty of owners, to mandates and restrictions imposed by local governments. These shutdowns have put financial strain on construction companies coupled with uncertainty of the future of their projects. The abrupt and unpredictable nature of the pandemic has left companies wondering if the outbreak can be deemed a Force Majeure event. Force Majeure is “a provision commonly found in contracts that frees both parties from obligation if an extraordinary event prevents one or both parties from performing” (Cornell Law School, 2020). In order to claim Force Majeure, the circumstances must be “unforeseeable and unavoidable, and not the result of the defendant's actions” (Cornell Law School, 2020). This may include natural disasters, wars, or riots, but it is not always that simple.

In regard to the COVID-19 pandemic being deemed a force majeure event, there is some argument over the status of the parameters. For example, one could say the pandemic was unpredictable, as it spread rapidly across the world. Someone else may argue that it could have been predicted, since the world has faced other disease outbreaks in the past, like SARS and MERS (Hansen, 2020). However, even this argument would face opposition that even though diseases and viruses may be predictable, the unprecedented steps that the federal, state, and local governments enacted, were unpredictable. Ultimately, these factors will be assessed on a case-by-case basis open to individual interpretation.

## **Research Objective**

The emergence of COVID-19 in the United States has drastically changed the way Californians work. Not only has it caused financial insecurity for businesses deemed non-essential, it has also forced essential companies to make abrupt changes to their daily routines in order to remain operational. The main objective of this case study is to inform those who will be entering the industry, current industry members, and educators of changes made within the commercial construction industry in California as a result of the COVID-19 pandemic. Due to the abrupt and unprecedented nature of the pandemic, recent changes made within office and jobsite protocols are requirements that have not been previously taught before in classrooms, or even working in the industry.

For students and others preparing to enter a post-COVID-19 workforce, this case study will help address safety concerns by providing the procedures companies are implementing to keep their employees healthy. Furthermore, it will help them better prepare for what to expect when they finally step on a jobsite. Today, more than ever, preparedness and compliance from all employees is imperative to assure the health of all companies.

For current industry members, this research may serve as a tool to identify the actions other companies are taking to mitigate risk and ensure safety during the pandemic. Although many companies have implemented similar jobsite practices, some have found innovative ways to improve their jobsite safety in the midst of COVID-19. Not only will construction companies benefit from sharing this information, but the community as a whole as companies improve their practices to slow the spread of this virus.

Lastly, this case study will aid professors as they alter their course material to reflect the new expectations within the construction industry. Since many professors may not see these new jobsite procedures first-hand, this paper will provide insight to professors who will have to learn new practices and procedures to teach to their students. This will allow students to receive current information that may not be otherwise accessible to them until they are able to see it on a jobsite.

## **Methodology**

This case study predominantly uses qualitative research collected through multiple primary sources, including government orders, county ordinances, company specific documentation, and interviews. Some secondary sources, such as news articles, were used while researching the background and timeline of the pandemic. The background portion of this case study also required quantitative research in order to express the magnitude of the COVID-19 pandemic and its impact on the United States, specifically in regard to the State of California.

Prior to conducting interviews, all information on new requirements as a result of COVID-19 was found on various government websites. Following initial research, two rounds of interviews were conducted for each of the five case study companies. The first round of interviews was semi-structured and consisted of thirteen pre-planned, open-ended questions. These interviews lasted between thirty minutes to an hour. The purpose of the second interview was to address any changes that occurred over the weeks following the first interview, as the circumstances surrounding the pandemic rapidly changed.

### *Interview Questions*

1. What area(s) of California do you work in?
2. How has COVID-19 affected regions differently? (For companies that work in multiple)
3. How has the pandemic affected any of your current projects or projects you were in the process of bidding?
4. What new safety precautions have you enforced since the beginning of COVID-19?
5. Has it been easy getting your employees and subcontractors working for you to comply?
6. How has COVID-19 affected lead times on certain materials?
7. Prior to the pandemic, what was your greatest concern with respect to business risk?
8. What is it now?
9. (For Hanover) As an owner/contractor, how has the pandemic impacted your company differently than other general contractors?
10. Is the pandemic affecting how you finance jobs?
11. Has COVID-19 affected your hiring process?
12. Will your interns and new hires start on time?
13. How do you think the COVID-19 pandemic will affect the industry over the next few years?

## **Analysis**

### *COVID-19 Project Impacts*

Throughout all regions of California observed in this case study, the regions impacted the most by the COVID-19 shutdowns were seven Bay Area counties: Alameda, Contra Costa, Marin, San Francisco, Santa Clara, Santa Cruz, and San Mateo. This is due to strict Shelter-in-Place orders issued early in March that only deemed healthcare, low-income housing, and senior housing as essential construction. This caused most construction to be halted for around a month until the order loosened on May 4<sup>th</sup>. At that point, construction could proceed by following strict guidelines. On the contrary, the region least impacted with COVID-19 shutdowns was the Central Valley; which had the least strict guidelines out of the Bay Area, Los Angeles, and San Diego regions.

### *New Safety Procedures and Protocol*

Overall, companies in all regions enforced the same basic policies that adhered to the guidelines laid out by the CDC. This includes social distancing, increased sanitation efforts, additional sanitation stations, COVID-19 signage, and employee screening. The Bay Area and San Diego required that all employees must have their temperatures taken before entering the jobsite, while other regions did not. Despite this, some companies chose to do it anyway.

### *Risk Assessment*

With respect to uncertainty, while some companies had a shift in business risk due to the pandemic, other companies did not. One common theme of risk before the pandemic was the lack of skilled labor. During the pandemic, common risks are navigating economic uncertainty and risks associated with cost and schedule impacts. None of the company's risks were found to be a product of the region they work in.

## **Results/Summarization**

### *Hanover Company*

Hanover Company is a private real estate company “specializing in the acquisition, development, and management of high-quality multi-family residential properties nationwide” (Hanover Company, 2020). Within the company there are many departments, including acquisitions, development, construction, property management and asset management that are “strategically focused on garden-style, mixed-use, high-density wood frame and high-rise projects” (Hanover Company, 2020). This case study focuses on Hanover's Los Angeles branch, which is managed by Tim Bolton, Vice President of Construction. Bolton is also responsible for overseeing projects in Orange County, Northern California, and Phoenix, AZ.

### *COVID-19 Project Impacts*

Between the areas of California he supervises, Bolton has seen major differences in approaches to containing COVID-19 from region to region. Overall, Bolton says, the Bay Area has been the most restrictive, initiating the first Shelter-in-Place orders around March 16<sup>th</sup> (Tim Bolton Interview 1). These orders only allowed for construction to continue for public works projects, affordable housing projects, and projects that would shelter homeless people. The original language in these orders allowed for confusion and caused Hanover to shut down projects in San Francisco and San Jose counties. Later, San Francisco County clarified that any residential project could continue, which allowed Hanover to re-open their multi-family housing project. At this point, San Jose County still said their project could not continue. Hanover's multi-family housing project in San Jose was stopped for two days until receiving approval from the county to continue. Unfortunately, another order on March 31<sup>st</sup> halted all construction that was not at least 10 percent affordable housing. At the time of Bolton's first interview on April 16, 2020, the project had been stopped for two weeks.

Conversely, Bolton says he has not seen as strict orders in Los Angeles and Orange Counties. All projects in these areas have been able to move forward so long as proper COVID-19 protocols are followed. Although, inspectors are able to shut-down any site that is not following these protocols (Tim Bolton Interview 1).

### *New Protocol and Procedures*

Hanover Company has issued a number of jobsite safety protocols that have been enforced on all of their jobsites across the country. Early on, Hanover hired nurses to take the temperatures of all workers at the gate of every jobsite before anyone could enter the site (Tim Bolton Interview 1). In addition to this, “subcontractor site supervisors are required to complete the COVID 19 Screening Verification daily” (“Hanover Construction Jobsite”). Once on site, all employees are required to wear a mask and gloves in addition to their usual personal protective equipment (PPE).

To make the work areas safer, Hanover has implemented additional sanitation measures and increased the number of on-site sanitation stations. Furthermore, informative posters have been placed around various locations of every site to increase awareness of workers and promote social distancing. They have also limited all gatherings to ten or fewer people, including daily toolbox talks. Now, toolbox talks will be given to subcontractors through written direction and will require each subcontractor’s confirmation (“Hanover Construction Jobsite”).

Most importantly, each jobsite is now required to “create a site specific COVID 19 safety plan for their project that is to be added to our existing site safety plan” (“Hanover Construction Jobsite”). On top of this, each team must “maintain a daily log of all COVID-19 related correspondence or activity that has (or may) impact the project” (“Hanover Construction Jobsite”). This is imperative to each team in order to keep everyone healthy and for the project to stay on schedule.

### *Risk Assessment*

Bolton stated that prior to the pandemic, one of his biggest risks was the chance of arson on wood-framed projects. This risk has increased during the pandemic due to having multiple projects shutdown (20). To mitigate this risk, Hanover has had to increase security on their sites, including hiring day-time security on sites that have been shut down. Additionally, because Hanover is an owner-builder, the company runs the risk of tenants failing to pay rent and the value of their assets decreasing. This poses a greater risk during the poor economic market caused by the pandemic. Lastly, the risk of delays on jobsites has increased with the chance that a worker is infected with the virus, causing the site to be shut down in accordance to county orders (20). Ultimately, all of these factors could delay a schedule and increase the cost of a project.

### *The Whiting-Turner Contracting Co.*

The Whiting-Turner Contracting Company was founded in 1909 by two Massachusetts Institute of Technology classmates, G.W.C. Whiting and LeBaron Turner, with a mission of building a “reputation for integrity, excellence, experience, and leadership as the nation’s finest construction organization” (Taylor, 2019). The company provides construction management, general contracting, design-build and integrated project delivery services out of more than fifty offices spanning the United States. This case study focuses on Whiting-Turner’s projects in Los Angeles County with insight from Tavio Darchangelo, Vice President of Whiting-Turner’s Sherman Oaks, CA office.

### *COVID-19 Project Impacts*

As of May 13, 2020, all projects within Whiting-Turner’s Los Angeles and Orange County offices were allowed to continue through the shutdown. Darchangelo says there has been a “stark difference between the Bay Area and Southern California” offices, as some projects in the Bay Area had been

shut down since March 16<sup>th</sup> (Darchangelo Interview 1, 2020). Although all projects in Los Angeles were able to continue, they had one client stop a project that was in progress, and six future projects postponed (Darchangelo Interview 1, 2020).

### *New Protocol and Procedures*

One step Darchangelo says Whiting-Turner took early on to “mitigate the spread of the virus” was switching to a 4/10 work schedule and limiting all Whiting-Turner employees to three days on site company-wide (Darchangelo Interview 1, 2020). This has posed a unique challenge for their project teams because it makes it more difficult to have “continuity and connectivity” between team members (Darchangelo Interview 1, 2020). Still, Darchangelo believes this early action helped prevent the spread of the virus on their jobsites because only five of their almost 4,200 employees company-wide had tested positive for COVID-19 at the time of the interview on May 13, 2020 (Darchangelo Interview 1, 2020).

In addition to the modified work week, Whiting-Turner established new jobsite protocol to ensure the health of their employees and subcontractors on site. Firstly, all employees must “self-report as they show up to work and confirm they do not have a fever, have not been in contact with anyone who has a fever, have not been in contact with anyone who tested positive for Coronavirus (COVID-19) and have not traveled to a Level 3 (or higher) country” (Jobsite Prevention). On top of this, all office trailers must be cleaned daily and have disinfectants available in all common areas for employees to wipe down their personal devices (Jobsite Prevention). In terms of PPE, all employees have been required to wear face coverings on site since April 14, 2020 (Jobsite Prevention).

In order to adhere to social distancing guidelines, set out by the CDC, Whiting-Turner has established plans on all projects to facilitate the movement of people on site. This includes dedicated pathways for one-way travel, staggered or regionalized trade sequencing, stairwells for dedicated up/down, and cleaning phasing (Jobsite Compliance). Additionally, six feet “No Fly” zones are marked out around the jobsite to promote social distancing, and signage must be posted throughout to notify all workers of these guidelines (Jobsite Compliance).

### *Risk Assessment*

Before COVID-19, Darchangelo felt his biggest risk was going into a project with a new client because he did not know how they would conduct business, such as if they would adhere to the contract or how they would pay (Darchangelo Interview 1, 2020). Now, he sees possibilities for contractual risks related to COVID-19. This includes the debate of whether the pandemic is considered a force majeure event, especially with contracts written after COVID-19 was declared a pandemic. He also fears health related insurance risks in the chance that someone on his project gets sick and spreads the virus. Though he says these are “unlikely,” they are still a concern (Darchangelo Interview 1, 2020).

### *Quiring General, LLC*

Quiring General, LLC was first founded by Ben Quiring as Quiring Construction in 1947 (Quiring General, LLC, 2020). In 2012, the creation of Quiring General, LLC made the company one of the first general contractors in California to become a limited liability company (Quiring General, LLC, 2020). Today the company is “recognized throughout Central California as the leading builder of demanding projects,” specifically in the medical, retail, senior living, multi-family and mixed-use

markets (Quiring General, LLC, 2020). The information within this case study was provided by Mike Schussel, Director of Construction in Central California.

### *COVID-19 Project Impacts*

Comparing the Bay Area and the Central Valley, Schussel says the Bay Area has been much more restrictive with COVID-19 requirements. Luckily, many of Quiring's projects in the Bay Area are healthcare and senior housing, so they did not face any shutdowns as they were deemed essential. One thing Schussel has noticed as a result of the pandemic is that some projects in preconstruction have taken longer to start. At the time of this writing, Quiring has not had any projects cancelled, but they have had some projects postponed (Mike Schussel Interview 1).

### *New Protocol and Procedures*

Since Quiring works in areas with differing COVID-19 requirements, some protocols vary from site to site. For example, some projects in the Bay Area require them to take the temperatures of all workers at the start of every day, but their Central Valley projects do not. Quiring also has a unique situation because COVID-19 requirements in the Central Valley have differed by jurisdiction, whereas requirements in the Bay Area have been the same across the different counties. As a result, their jobsites in the City of Fresno require all workers to wear masks, while masks are optional on their projects in Clovis, two cities with no discernable geographic separation between them.

On all jobsites, they have added daily pre-tasks to ensure no employees have been in contact with sick individuals or feel sick themselves. They have also added signage and enforced social distancing rules around each site. To facilitate this, most on-site meetings have been moved online to Zoom to limit person-to-person interaction. Additionally, Quiring has placed extra handwashing stations on their sites, and scheduled additional cleaning, especially in high-touch areas (Mike Schussel Interview 1).

### *Risk Assessment*

Prior to the pandemic, Schussel's biggest concern was hiring and retaining great people. He says, to Quiring, "[their] people are everything," and their main goal is "to give them a healthy work environment and a culture they want to work within" (Mike Schussel Interview 1). Before COVID-19, good talent and labor was a limited resource. This is still a concern to him, but now his focus has also shifted to economic uncertainty as they move forward. At one time, the healthcare sector of construction was a face to be. Now that many people are avoiding going to the doctor and elective procedures were halted for a period of time, hospitals are losing revenue. Moving forward, Schussel will be focused on building the company's backlog to mitigate this.

### *Morley Builders, Inc.*

Morley Builders consists of two wholly owned subsidiaries, Morley Construction Company and Benchmark Contractors, Inc. The company is owned by over two-hundred employees and has provided construction services in Southern California for over seventy years. Headquartered in Santa Monica, CA, Morley builds "major civic structures; educational and research facilities; parking structures; commercial, retail, medical and healthcare buildings; and multifamily residential complexes" (Morley Builders, 2020). Morley Builders' President, Charlie Mutillo, provided all insight on how Morley has navigated business during the pandemic for this case study.

### *COVID-19 Project Impacts*

In terms of COVID-19 restrictions, Charlie Muttillio says Los Angeles and San Diego counties have been about the same. In both regions, every project that Morley has under construction has remained under construction (Charlie Muttillio Interview 1). Due to an uncertain future for the economy, they have experienced some jobs slated for the future be put on hold.

### *New Protocol and Procedures*

Morley's new safety protocol is fully based on the CDC's guidelines for COVID-19. This includes a health assessment that all workers must receive before stepping on site every day to ensure they are not infected or have been in contact with infected individuals. A unique thing Morley has done in the midst of the pandemic is develop an app with their IT group that simplifies and manages this daily task of completing health assessments (Charlie Muttillio Interview 1). According to Muttillio, Morley is also performing temperature screenings on all San Diego jobsites as a requirement by San Diego County (Charlie Muttillio Interview 1). As of May 18, 2020, Los Angeles County did not require temperature screenings. On every Morley jobsite, all Morley employees and subcontractors are required to wear face coverings. Along with this, Morley has limited the amount of people on each site and has enacted measures to ensure everyone is able to maintain proper social distancing.

### *Risk Assessment*

Due to a busy industry, finding talented people to manage work and quality tradesmen was a concern for Muttillio. Now, the pandemic has somewhat shifted the risk by making it crucial to follow and enforce all CDC guidelines. Furthermore, Muttillio explained that while Morley employees have had an easy transition into working from home, it is going to be a challenge to create company culture while everyone is working remotely. This remote work also led to a slight decrease in productivity towards the beginning of the pandemic because people were harder to contact. In particular, Muttillio has noticed that schedules are taking longer than before. On top of this, many owners do not know what the future will hold for them due to the declining economy. This has resulted in hesitance from owners to start projects, especially with buildings designed prior to the pandemic.

### *Truebeck Construction*

Truebeck Construction was founded in 2007 by David Becker and Sean Truesdale with a mission to "disrupt the traditional and ordinary" (Truebeck Construction, 2020a). The company provides preconstruction and construction services out of four offices in San Mateo, San Francisco, Pleasanton, and Portland (Truebeck Construction, 2020b). As a progressive builder, they offer alternative delivery methods and use innovative practices, such as in-house CTI capabilities (Truebeck Construction, 2020a). This case study includes information from Cory Keller, a Senior Project Executive in San Mateo, CA.

### *COVID-19 Project Impacts*

A large portion of Truebeck's projects in the Bay Area were on hold for around a four-week period at the beginning of COVID-19 shutdowns. By May 4<sup>th</sup>, these projects were allowed to continue again with strict guidelines. During this time, Truebeck had several healthcare and biotech projects that were deemed essential and were allowed to proceed during shutdowns. Out of their projects in



preconstruction, they have had some clients postpone projects, but have not had any client completely cancel a project.

### *New Protocol and Procedures*

To increase safety on their jobsites, Truebeck developed a Communicable Disease Prevention Program (CDPP) that includes screening, face coverings, social distancing, additional signage, and increased sanitation measures (Cory Keller Interview 1). Every trade partner on their projects is also required to have their own CDPP plan. This CDPP also discourages gatherings of any size on their jobsites and requires all employees to complete onboarding training that is inclusive of site specific COVID-19 prevention. Some sites also require temperature screening “in cooperation with local union Collective Bargaining Agreements” (CDPP, 2020).

In addition to their own protocol, San Mateo County requires that a Safety Compliance Officer (SCO) is assigned to every jobsite to ensure the “implementation of recommended safety and sanitation requirements” (CDPP, 2020). Every site also has a Jobsite Safety Accountability Supervisor (JSAS) that should “visually inspect [the] project and conduct random interviews with workers” to ensure county orders are being followed.

### *Risk Assessment*

Cory says that prior to COVID-19, a lack of available manpower was a big risk, and that concern is still there now (Cory Keller Interview 1). During the pandemic, he has seen more risk for cost and schedule impacts due to new inefficiencies. Overall, his risk has not shifted much as a result of the pandemic.

## **Conclusion**

Commercial construction companies in California have adapted well to the sudden changes within the industry caused by the unprecedented novel coronavirus. Throughout all regions of the state, companies have implemented new protocols in order to keep their employees safe and stop the spread of the virus. Many of these protocols have never been previously required within the industry but have now become the new normal. These changes have not come without struggles, though, as many companies now face new health, financial, and legal risks.

## **Areas of Further Research**

The COVID-19 pandemic has forced a complete overhaul of the Californian work dynamics and practices within the commercial construction industry that will undoubtedly be around for many months, or possibly years, to come. As the situation progresses, there are predictions that COVID-19 requirements for construction will continue to shift. As this happens, there is opportunity for further research of this situation to discover what long-lasting impacts the pandemic will have.

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